In the Specification:

Please amend the paragraph beginning at line 16 of page 35 as follows:

Figure 5 illustrates a block diagram of an exemplary process 500 of an electronic inspection and die-strip map database updating method, in accordance with one embodiment of the present invention. Figure 10 is a flow chart of steps for reject management protocol 1000 used in conjunction with the in-line integrated in-line back-end IC manufacturing assembly, in accordance with one embodiment of the present invention. With reference now to step 1002 of Figure 10 and Figure 5, the present embodiment implements an automated and database driven tracking process for die-strip 400 which uses the camera vision systems to automatically identify individual die-strips 400 and their respective locations as they traverse through the in-line assembly line 200. In one embodiment, the tracking process starts at die attach substation 304 and is maintained throughout the entire back-end IC manufacturing process. However, in order to maintain a die-strip level tracking process, a two-dimensional code, known as data matrix 2D symbol 510 may be placed on every die-strip 400. In one embodiment, data matrix 2D symbol 510 is etched onto die-strip 400 by a laser. However any printing or affixing method could be used.

Please amend the paragraph beginning at line 19 of page 32 as follows:

Figure 6 is a block diagram of exemplary reject management system 650, in accordance with one embodiment of the present invention. With reference still to

step 902 of Figure 9 and Figure 6, the communications protocol is utilized to provide an interface between portions of the integrated in-line back-end IC manufacturing hardware 200. In another embodiment, the communications protocol may be established within each piece of hardware on line 200. As shown in Figure 6, the communications protocol results in a software hierarchy for line 200. In another embodiment, the software hierarchy is established to maintain overall control of line 200. Further, the communications protocol is independent of the hardware platform. Thus, compatible communication between any portion of line 200 is obtained.

Please amend the paragraph beginning at line 19 of page 41 as follows:

<u>Figure 7 is a block diagram illustrating an exemplary reject management and sorting system 750 in accordance with another embodiment of the present invention.</u> Therefore, with reference to Figures 6 and 7, when die-strip 400 reaches saw substation 320 and sort substation 322, the electronic die-strip map is downloaded and the information is used to automatically sort and reject the designated "bad" units. Sorting may be performed based on any managed parameters. Specifically, the reject management protocols utilize the electronic die-strip map database 620 categories and either accept or reject each die. In another embodiment, subsequent rejection processes take place following the testing, marking, and final visual inspection steps of the integrated in-line IC assembly method. At each rejection evaluation, accepted units continue the process while any rejected units are automatically placed in reject bins 610. Further, it is possible for the electronic die-strip map database 620 to isolate specific rejected units on die-

strip 400 early in the in-line manufacturing process such that no further back-end IC manufacturing processes are performed on the rejected units. In fact, rejected components, which are identified early in the manufacturing process, remain in their rejected state on die-strip 400 until reaching sort substation 322. At that point, all rejected units are deposited in reject bins 610. Thus, valuable manufacturing materials are saved for use on accepted units. In one embodiment, when a unit has passed all required evaluations and completed the tape and reel substation 328 of the in-line assembly process, the reel is then placed in a good bin 710.

Please amend the paragraph beginning at line 17 of page 20 as follows:

Figure 8 is a flow diagram for illustrating pertinent process steps <u>800</u> associated with line 200. With reference now to step 802 of Figure 8 and to Figure 3A, the present embodiment processes die-strip 400 through front-of-line assembly portion 300A. As described above, the implementation of a single die-strip 400 traveling through line 200, allows for a more personal approach to the manufacturing process. Specifically, since only a single die-strip 400 is processed through each substation, an order may be placed for a number of IC chips which is smaller than the conventional art batch size without ensuing the extraordinary costs previously associated with a small run. It is also relevant that the difference in size between a single die-strip 400 and a batch containing 50 or so die-strips, enables smaller more efficient machinery to be utilized during line 200. In general, the present embodiment processes die-strip 400 individually in an in-line fashion. Therefore, the batch process used by the conventional art is removed from the integrated in-line back-end IC manufacturing method of the present embodiment.

Please amend the paragraph beginning at line 15 of page 43 as follows:

<u>Figure 11 is a flow chart of steps in an exemplary method 1100 for universal packaging, in accordance with one embodiment of the present invention.</u> With reference now to step 1102 of Figure 11 and Figure 6, an electronic die-strip map database 620 is accessed. Specifically, mold 314 of portion 300B is established as the introductory point, in process 650, for the universal packaging process. As stated above, mold 314 is the step in the back-end IC manufacturing process wherein the die above die-strip 400 is covered in a protective coating. In one embodiment, the protective coating is a type of plastic. Moreover, the protective coating is placed in a specific location on die-strip 400. That is independent of any actual die shape. In fact, mold 314 is a standard process applied to each die-strip 400. As such, there is no need for modification of mold 314 process per specific die size run. Thus, any mechanical or manufacturing modifications required by mold 314 are reduced. Specifically, as long as the size of die-strip 400 remains constant, the size of the die on die-strip 400 is immaterial. In addition, die-strip 400 may utilize either plastic or copper as the strip portion for die attachment without any detrimental effects.

Please amend the paragraph beginning at line 5 of page 31 as follows:

<u>Figure 12 is a block diagram of an exemplary general purpose computing system 1200 in accordance with one embodiment of the present invention.</u> With reference now to Figure 12, portions of the present embodiment are comprised of

or controlled by computer-readable and computer-executable instructions which reside, for example, in computer-usable media of a computer control system. Figure 12 illustrates an exemplary computer system 1212 that may be used in accordance with one embodiment of the present invention. It is appreciated that system 1212 of Figure 12 is exemplary only and that the present embodiment can operate on or within, or be controlled by, a number of different computer systems including general purpose networked computer systems, embedded computer systems, routers, switches, server devices, client devices, various intermediate devices/nodes, stand alone computer systems, and the like. Additionally, computer system 1212 of Figure 12 is well adapted having computer readable media such as, for example, a floppy disk, a compact disc, and the like coupled thereto.

Please amend the paragraph beginning at line 11 of page 34 as follows:

A further example of multiple embodiments of the software hierarchy is illustrated in Figure 13. <u>Figure 13 is a block diagram of an exemplary method 1350 of electronic inspection and strip map database updating in accordance with another embodiment of the present invention.</u> Specifically, Figure 13 is a representation of the steps taken by the visual system, e.g., V/C 302, to view the die-strip 400. The results of their inspections are collected by CC 602 and CC 604 units and are then transferred to the central MES 600 system. In one embodiment, the inspection results are further transferred to database 620. In general the three columns (e.g. die-strips i, i+1, and i+2) represent portions of a die-strip 400 die map.

Specifically, boxes F1-F8 represent mapping, while E1-E4 represent other parameters collected at other visual stations. All boxes represent process history information including individual die-strip map database (e.g. 620) and inspection (e.g. quality assurance (QA) 1 1310 and QA2 1320. As stated herein, all data collected by V/C 302 systems is stored in a database that maintains each die-strip 400s' processing history. Although a specific hierarchy of computer systems is established, the present embodiment is well suited to many types of computer system hierarchy. Additionally, the present embodiment of computer system hierarchy is illustrated for purposes of clarity, not as a means of limitation.